STUDIES IN THE EUPATORIEAE (ASTERACEAE). LI.

THE DISYNAPHIOID COMPLEX.

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The study of the Eupatorieae has reached a point where a large complex of South American genera related to Disynaphia can be recognized. These genera which we refer to as Disynaphioid belong to a still larger complex of primarily eastern North American and eastern South American genera including those we have called Eupatorioid and Gyptoid. The Disynaphia complex is distinct from the Eupatorioids by the lack of hairs on the base of the style and differs from the Gyptoids by the rather consistent five flowers per head. Other characters of the group include the papillose linear style branches, smooth corolla lobes, strongly annulate thickenings in the anther collars and transversely alined punctations on the walls of the achene. The bases of the anthers in a number of the genera are hastate. The Disynaphia complex as presently recognized contains six genera which are treated in the next papers of this series. The distinctions of these genera are summarized in the following key.

1. Inflorescence pyramidally paniculate.
 2. Leaves pinnately to bipinnately dissected with long narrow lobes, style branches in distal part fragile and bearing long spines; apical cells of pappus setae sharply acute Acanthostyles
 2. Leaves narrowly ovate to linear, serrulate; style branches short-papillose; apical cells of pappus setae blunt and enlarged Raulinoreitzia
1. Inflorescence corymbose, flattened on top.
 3. Pedicels essentially glabrous, striated with prominent ridges; plants often having viscous appearance Symphyopappus
 3. Pedicels distinctly pubescent, not or scarcely ridged.
  4. Leaves opposite, sometimes dissected; involucre with long narrow often reddish phyllaries in outer series; pappus not usually separating from achene as a unit Dimorpholepis
  4. Leaves alternate or opposite, never dissected; involucre without distinctive narrower phyllaries in outer series; pappus often separating from achene as a unit.
   5. Outer surface of phyllaries glabrous; leaves sometimes opposite; achene with small but distinct swollen carpopodium; anthers not hastate at base Campovassouria

5. Outer surface of phyllaries pubescent; leaves alternate; achene with carpopodium obsolete; anthers hastate at base Disynaphia

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